

## Claims

What is claimed is:

- 1 1. A method for allocating resources in a circuit switched data network, comprising:
  - 2 receiving a request for a resource from a device coupled to the circuit switched
  - 3 data network;
  - 4 granting the resource to the requesting device if the resource is available,
  - 5 otherwise:
    - 6 examining a first factor corresponding to an instantaneous quantity of data to be
    - 7 transmitted by the requesting device;
    - 8 examining a second factor corresponding to a rate of change in the instantaneous
    - 9 quantity of data to be transmitted by the requesting device;
    - 10 examining a third factor corresponding to a time of utilization of the resource by
    - 11 the requesting device;
    - 12 granting the resource to the requesting device based on the examination of the
    - 13 first, second and third factors.
- 1 2. The method of claim 1, wherein the resource comprises a communications channel in
- 2 the circuit switched network.
- 1 3. The method of claim 2, wherein the communications channel in the circuit switched
- 2 network comprises a radio frequency communications channel in the circuit switched
- 3 network.



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1 11. The method of claim 1, wherein receiving a request for a resource from a device  
2 coupled to the circuit switched data network when a threshold for requesting the resource  
3 has been achieved, comprises adjusting the threshold for requesting the resource based on  
4 a number of resources already allocated to the device, and receiving the request for the  
5 resource from the device coupled to the circuit switched data network when the threshold  
6 for requesting the resource has been achieved.

1 12. The method of claim 1, wherein granting the resource to the requesting device based  
2 on the examination of the first, second and third factors further comprises first  
3 deallocating the resource from a second device.

1 13. An article of manufacture, comprising:  
2 a machine accessible medium, the machine accessible medium providing instructions,  
3 that when executed by a machine, cause the machine to allocate resources in a circuit  
4 switched data network, comprising:  
5 receiving a request for a resource from a device coupled to the circuit switched  
6 data network;  
7 granting the resource to the requesting device if the resource is available,  
8 otherwise:  
9 examining a first factor corresponding to an instantaneous quantity of data to be  
10 transmitted by the requesting device;  
11 examining second factor corresponding to a rate of change in the instantaneous  
12 quantity of data to be transmitted by the requesting device;





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3 receiving a request at a communications device coupled to the circuit switched  
4 data network to allocate the communications channel to transmit data to a remote  
5 communications device capable of being coupled to the circuit switched data network;  
6 granting the request if the communications channel is available, otherwise:  
7 examining a first factor corresponding to an instantaneous quantity of data to be  
8 transmitted to the remote communications device;  
9 examining a second factor corresponding to a rate of change in the instantaneous  
10 quantity of data to be transmitted to the remote communications device;  
11 examining a third factor corresponding to a time of utilization of the  
12 communications channel by the remote communications device;  
13 allocating the communications channel between the communications device and  
14 the remote communications device based on the examination of the first, second and third  
15 factors.

1 25. The method of claim 24, wherein the communications channel in the circuit switched  
2 network comprises a radio frequency communications channel in the circuit switched  
3 network.

1 26. The method of claim 24, wherein receiving a request at a communications device  
2 coupled to the circuit switched data network to allocate the communications channel to  
3 transmit data to a remote communications device capable of being coupled to the circuit  
4 switched data network, comprises receiving a request at a communications device  
5 coupled to the circuit switched data network to allocate the communications channel to

6 transmit data to a remote communications device capable of being coupled to the circuit  
7 switched data network when a threshold for requesting allocation of the communications  
8 channel has been achieved.

1 27. The method of claim 26, wherein the threshold comprises a depth of a data  
2 transmission queue for the remote communications device.

1 28. The method of claim 27, wherein the depth of the data transmission queue for the  
2 remote communications device comprises a moving average of the depth of the data  
3 transmission queue for the remote communications device.

1 29. The method of claim 26, wherein the threshold comprises a rate of change in a depth  
2 of a data transmission queue for the remote communications device.

1 30. An article of manufacture, comprising:  
2 a machine accessible medium, the machine accessible medium providing instructions,  
3 that when executed by a machine, cause the machine to allocate a communications  
4 channel in a circuit switched data network, comprising:  
5 receiving a request at a communications device coupled to the circuit switched  
6 data network to allocate the communications channel to transmit data to a remote  
7 communications device capable of being coupled to the circuit switched data network;  
8 granting the request if the communications channel is available, otherwise:

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9           examining a first factor corresponding to an instantaneous quantity of data to be  
10 transmitted to the remote communications device;  
11           examining a second factor corresponding to a rate of change in the instantaneous  
12 quantity of data to be transmitted to the remote communications device;  
13           examining a third factor corresponding to a time of utilization of the  
14 communications channel by the remote communications device;  
15           allocating the communications channel between the communications device and  
16 the remote communications device based on the examination of the first, second and third  
17 factors.

1   31. The article of manufacture of claim 30, wherein receiving a request at a  
2 communications device coupled to the circuit switched data network to allocate the  
3 communications channel to transmit data to a remote communications device capable of  
4 being coupled to the circuit switched data network, comprises receiving a request at a  
5 communications device coupled to the circuit switched data network to allocate the  
6 communications channel to transmit data to a remote communications device capable of  
7 being coupled to the circuit switched data network when a threshold for requesting  
8 allocation of the communications channel has been achieved.